



A BIBLIOGRAPHY FOR THE NORTH AMERICAN BREEDING BIRD SURVEY



Bruce Peterjohn and Keith Pardieck
USGS Patuxent Wildlife Research Center
Laurel, Maryland (Updated 11/25/02)

(Link to the North American Breeding Bird Survey)

(Link to the North American Breeding Bird Survey Results and Analysis)

Introduction

Breeding Bird Survey Publications and Related Topics

INTRODUCTION

The North American Breeding Bird Survey (BBS) was initiated in 1966 to monitor the status and trends of the continent's avifauna. Surveys were limited to eastern North America during the first year, and by 1968, routes had been established across the continental U.S. and Canadian provinces. The BBS was extended into Alaska and the northern Canadian territories during the early 1980s. Approximately 4000 active surveys routes are currently established in the U.S. and Canada.

Since its inception, the main emphasis of the BBS has been to provide information on the distribution and trends of all bird species that are regularly encountered on these surveys. However, these data have also been used for various other purposes. For example, BBS data have been instrumental in the development of methods to estimate population trends from survey data, while some of the potential biases associated with survey data have been explored through the use of the BBS data set. As this database has grown during the past 32 years, the potential uses for it have also expanded. Questions concerning landscape ecology and community ecology at large geographic scales are being addressed with BBS data, and the potential for future research opportunities remains fertile.

This bibliography summarizes the published literature related to the BBS. It includes articles based solely on BBS data as well as references using various data sources where BBS data are integral components of the publication. Literature sources where BBS data are minor components of the published information, such as many breeding bird atlases, have not been included although a separate listing of these sources may be developed at a later date. This bibliography was derived primarily from professional journals and from regional and state periodicals devoted to birds, but does not include newsletters from local bird clubs. A few theses and dissertations have been included where BBS data or methodology have been the main emphasis of the research, but this list is undoubtedly incomplete. A few government publications and similar “gray literature” sources are included, but such references are difficult to locate and many others have likely been missed. We recognize that this bibliography is probably incomplete, and encourage the authors of published articles using BBS data to inform us of literature sources that have been overlooked. Our intention is to make this bibliography as inclusive as possible, and to provide updates on an annual basis.

Key words are provided to assist in searching this bibliography. Very general terms such as “breeding bird survey” or “birds” are not helpful for this specialized bibliography and have been avoided. Where key words or phrases are provided in the references, these words have also been used in this bibliography. However, the majority of references lacked key words and we have used the following terms to denote the major themes of references related to the BBS:

Geographic Range: for references using BBS data as a source of distributional information for species

Survey Overview: general articles about the BBS and the history of the survey

Survey Methods: sources that discuss the methodology specific to the BBS. Literature sources that provide general information about point-count methodology have been excluded

Analytical Methods: articles discussing the development of trend estimation procedures that have been applied to BBS data

Population Trends: references summarizing the trends estimated for a single species or group of species

State Summary: sources that have summarized the activities of the BBS within a single state or province/territory in Canada. These references may have summarized population trends, distributional data, and/or general information about survey activities.

Regional Summary: sources summarizing BBS data over multiple states/provinces/territories

Guild Summary: summaries of BBS data for groups of species with similar traits (e.g. Neotropical migrants, grassland birds, cavity-nesting birds, etc...)

Additionally, a small number of papers dealing with topics including observer bias, roadside bias, community ecology, landscape ecology, and population ecology use those terms as key words.

We acknowledge the valuable assistance of Lynda J. Garrett and Wanda Manning, librarians at the USGS Patuxent Wildlife Research Center, who conducted several computerized searches of the literature and located a number of the more obscure references. Connie Downes assisted in identifying BBS-related publications in Canada, while William Carter and Hugh Kingery provided information about literature sources in their states.

Breeding Bird Survey Publications and Related Topics

Aldrich, J.W., and C.S. Robbins. 1970. Changing abundance of migratory birds in North America. *Smithsonian Contr. Zool.* 26:17-26. **Key Words:** population trends; regional summary; relative abundance

Anderson, R. 1969. Breeding Bird Survey in Missouri. *Bluebird* 36:23-24. **Key Words:** state summary

Arcese, P., and V.M. Bauldry. 1997. Corroboration of the North American Breeding Bird Survey for Eastern Bluebirds. *North American Bird Bander* 22:169-172. **Key Words:** population trends; Eastern Bluebird; *Sialia sialis*; counts; survey methods

Askins, R.A. 1993. Population trends in grassland, shrubland, and forest birds in eastern North America. Pages 1-34 in D.M. Power, ed. *Current Ornithology*, Vol. 11. Plenum Press, New York. **Key Words:** guild summary; regional summary; population trends; bird-habitat relations; Neotropical migrants; short-distance migrants

Askins, R.A., J.F. Lynch, and R.S. Greenberg. 1990. Population declines in migratory birds in eastern North America. Pages 1-57 in D.M Power, ed. *Current Ornithology*, Vol. 7. Plenum Press, New York. **Key Words:** population trends; regional summary; guild summary; Neotropical migrants; woodland birds; forest fragmentation; bird-habitat relations

Baker, B.W. 1977. An analysis of the Breeding Bird Survey in northwestern California.

M.S. thesis, Humboldt State Univ., Arcata, CA. **Key Words:** survey methods; regional summary

Barker, R.J., and J.R. Sauer. 1992. Modelling population change from time series data. Pages 182-194 in D.R. McCullough and R.H. Barrett, eds. *Wildlife 2001: populations*. Elsevier, Amsterdam. **Key Words:** analytical methods; route regression; counts; population trends

Bart, J., and S.P. Klosiewski. 1989. Use of presence-absence to measure changes in avian density. *Jour. Wildl. Manage.* 53:847-852. **Key Words:** analytical methods; presence-absence data; population trends; counts; frequency of occurrence

Bart, J., and J.D. Schoultz. 1984. Reliability of singing bird surveys: changes in observer efficiency with avian density. *Auk* 101:307-318. **Key Words:** observer bias; count efficiency; relative abundance; presence-absence data; population trends

Bart, J., M. Hofschien, and B.G. Peterjohn. 1995. Reliability of the Breeding Bird Survey: effects of restricting surveys to roads. *Auk* 112:758-761. **Key Words:** roadside bias; satellite imagery analysis; Ohio; forest cover changes; land cover classification

Baumgartner, A.M., and W.A. Carter. 1968. Breeding Bird Survey in Oklahoma. *Scissortail* 18:48-49. **Key Words:** state summary

Beard, K.H., N. Hengartner, and D.K. Skelly. 1999. Effectiveness of predicting breeding bird distributions using probabilistic models. *Conservation Biology* 13:1108-1116. **Key Words:** analytical methods; species distribution

Bedell, P.A. 1996. Evidence of dual breeding ranges for the Sedge Wren in the central Great Plains. *Wilson Bull.* 108:115-122. **Key Words:** geographic range; summer movements; *Cistothorus platensis*; Nebraska

Blackwell, B.F. and R.A. Dolbeer. 2001. Decline of the Red-winged Blackbird

population in Ohio correlated to changes on agriculture (1965-1996). *J. of*

Wildlife Management 65:661-667. **Key Words:** Red-winged Blackbird, *Agelaius phoeniceus*, Ohio, population trend, habitat change

Boarman, W.I., and K.H. Berry. 1995. Common Ravens in the southwestern United States, 1968-92. Pages 73-75 in E.T. LaRoe, G.S. Farris, C.E. Puckett, P.D. Doran, and M.J. Mac, eds. *Our living resources: a report to the nation on the distribution, abundance and health of U.S. plants, animals, and ecosystems*. USDO, National Biological Service, Washington, D.C. **Key Words:** population trends; *Corvus corax*; southwestern deserts

Bock, C., and L.W. Lephien. 1975. Patterns of bird species diversity revealed by Christmas counts versus Breeding Bird Surveys. *West. Birds* 6:95-100. **Key Words:** community ecology; species diversity; winter diversity; Christmas Bird Counts; species-climate relations

Böhning-Gaese, K., M.L. Taper, and J.H. Brown. 1993. Are declines in North American insectivorous songbirds due to causes on the breeding range? *Conservation Biology* 7:76-86. **Key Words:** population trends; guild summary; Neotropical migrants; predation vulnerability; cowbird parasitism

Böhning-Gaese, K., M.L. Taper, and J.H. Brown. 1994. Avian community dynamics are discordant in space and time. *Oikos* 70:121-126. **Key Words:** community ecology; population trends; insectivorous songbirds; regional population dynamics

Boren, J.C., D.M. Engle, M.W. Palmer, R.E. Masters, T. Criner. 1999. Land use change effects on breeding bird community composition. *J. of Range Management* 52:420-430. **Key Words:** habitat change; grassland birds; community dynamics

Boulinier, T., J.D. Nichols, J.R. Sauer, J.E. Hines, and K.H. Pollock. 1998. Estimating species richness: the importance of heterogeneity in species detectability. *Ecology* 79: 1018-1028. **Key Words:** community ecology; species richness; detectability; capture-recapture; heterogeneity

Boulinier, T., J.D. Nichols, J.E. Hines, J.R. Sauer, C.H. Flather, and K.H. Pollock. 1998. Higher temporal variability of forest breeding bird communities in fragmented landscapes. *Proc. Natl. Acad. Sci.* 95: 7497-7501. **Key Words:** community ecology; forest fragmentation; landscape ecology; species richness; forest bird communities; avian community stability

Boulinier, T., J.D. Nichols, J.E. Hines, J.R. Sauer, C.H. Flather, and K.H. Pollock. 2001. Forest fragmentation and bird community dynamics: inference at regional scales. *Ecology* 82:1159-1169. **Key Words:** community ecology; species richness; habitat change; fragmentation; heterogeneity

Brauning, D. 1994. Population trends of Pennsylvania's nesting birds: a response. *Pennsylvania Birds* 8:66-67. **Key Words:** state summary; Pennsylvania; population trends; Neotropical migrants

Brauning, D., M.C. Brittingham, D.A. Gross, R.C. Leberman, T.L. Master, and R.S. Mulvihill. 1994. Pennsylvania breeding birds of special concern: a listing rationale and status update. *Jour. Pennsylvania Acad. Sci.* 68:3-28. **Key Words:** population trends; state summary; conservation status

Brown, J.H., D.W. Mehlman, and G.C. Stevens. 1995. Spatial variation in abundance. *Ecology* 76:2028-2043. **Key Words:** community ecology; distribution; biogeography; conservation biology; population dynamics

Buck, D. 1970. Five year report: Breeding Bird Survey in northern Indiana. *Indiana Audubon Quart.* 48:115-117. **Key Words:** state summary

Bystrak, D., and C.S. Robbins. 1977. Bird population trends detected by the North American Breeding Bird Survey. *Pol. Ecol. Stud.* 3:131-143. **Key Words:** population trends; regional summary

Bystrak, D. 1979. The Breeding Bird Survey. *Sialia* 1:74-79. **Key Words:** survey overview

Bystrak, D. 1980. The Breeding Bird Survey. *Atlantic Nat.* 33:25-28. **Key Words:** survey overview

Bystrak, D. 1980. Application of miniroutes to bird population studies. *Maryland Birdlife* 36:131-138. **Key Words:** survey methods; relative abundance; geographic patterns of distribution

Bystrak, D. 1981. The North American Breeding Bird Survey. Pages 34-41 *in* C.J. Ralph and J.M. Scott, eds. Estimating numbers of terrestrial birds. *Studies in Avian Biology* No. 6. **Key Words:** survey overview

Cam, E., J.D. Nichols, J.E. Hines, J.R. Sauer. 2000. Inferences about nested subsets structure when not all species are detected. *Oikos* 91:428-434. **Key Words:** analytical methods

Cam, E., J.R. Sauer, J.D. Nichols, J.E. Hines, C.H. Flather. 2000. Geographic analysis of species richness and community attributes of forest birds from survey data in the Mid-Atlantic integrated assessment region. *Environmental Monitoring and Assessment* 63:81-94. **Key Words:** MAIA; mid-Atlantic; species richness; analytical methods; community dynamics

Carter, M.F., and K. Barker. 1993. An interactive database for setting conservation priorities for western Neotropical migrants. Pages 120-144 *in* D.M. Finch and P.W. Stangel, eds. Status and management of Neotropical migratory birds. USDA Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** species ranking criteria; population trends; guild summary; regional summary

Carter, M.F., W.C. Hunter, D.N. Pashley, and K.V. Rosenberg. 2000. Setting conservation priorities for landbirds in the United States: The Partners in Flight approach.

Auk 117:541-548. **Key Words:** PIF; Partners in Flight; bird conservation; conservation priorities; United States

Carter, W.A. 1975. USFWS Breeding Bird Survey--1975 report. Scissortail 25:72-74. **Key Words:** state summary; Oklahoma

Castrale, J.S. 1985. The breeding bird survey in Indiana: eighteen years of overlooked data. Indiana Audubon Quart. 63:15-30. **Key Words:** state summary

Castrale, J.S. 1985. Endangered and threatened birds of Indiana: population information from Breeding Bird Surveys. Indiana Audubon Quart. 63:134-147. **Key Words:** state summary; population trends

Clark, R.G., P.J. Weatherhead, and R.D. Titman. 1983. On the relationship between breeding bird survey counts and estimates of male density in the Red-winged Blackbird. Wilson Bull. 95:453-459. **Key Words:** survey methods; density estimates; counts; sampling precision; *Agelaius phoeniceus*; Québec

Coffey, L.C. 1968. The 1967 Breeding Bird Surveys--west Tennessee. Migrant 39:4. **Key Words:** state summary

Collins, B.T. 1990. Using rerandomizing tests in route-regression analysis of avian population trends. Pages 63-70 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. USDOI, Fish and Wildlife Service, Biological Report 90(1). **Key Words:** analytical methods; route regression; rerandomization test; weighting factors; population trends

Collins, B.T. 1990. Analysis of scissor-tailed flycatcher population changes. Pages 157-159 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. USDOI, Fish and Wildlife Service, Biological Report 90(1). **Key Words:** analytical methods; route regression; population trends; *Tyrannus forficatus*

Collins, B.T., and J.S. Wendt. 1989. The breeding bird survey in Canada 1966-83: analysis of trends in breeding bird populations. Can. Wildl. Serv. Tech. Rep. No. 75. 81 pp. **Key Words:** population trends; Canada; regional analysis

Coppedge, B.R., D.M. Engle, R.E. Masters, M.S. Gregory. 2001. Avian response to landscape change in fragmented southern Great Plains grasslands. Ecological Applications 11:47-59. **Key Words:** habitat change; grassland birds; bird-habitat relations

Cortelyou, R.C. 1978. The first eleven years of Breeding Bird Surveys in Nebraska. Nebraska Bird Rev. 46:38-62. **Key Words:** state summary

Cox, J. 1987. The breeding bird survey in Florida: 1969-1983. *Florida Field Nat.* 15:29-44. **Key Words:** state summary

Cox, J. 1990. Evaluation of the sensitivity of breeding bird surveys using a stochastic simulation model. Pages 114-119 in J.R. Sauer and S. Droege, eds. *Survey designs and statistical methods for the estimation of avian population trends.* USDOI, Fish and Wildlife Service, Biological Report 90(1). **Key Words:** survey methods; population trends; frequency of occurrence; sample sizes

Cumming, E.D., K.A. Hobson, S.L. Van Wilgenburg. 2001. Breeding bird declines in the boreal forest fringe of western Canada: insights from long-term BBS routes. *Canadian Field-Naturalist* 115:425-435. **Key Words:** population trends; habitat change; western Canada; boreal forest

Curnutt, J.L., S.L. Pimm, and B.A. Maurer. 1996. Population variability of sparrows in space and time. *Oikos* 76:131-144. **Key Words:** community ecology; population ecology; geographic range; relative abundance; source-sink dynamics; population variability; grassland birds;

Cyr, A., and J. Larivée. 1993. A checklist approach for monitoring Neotropical migrant birds: twenty-year trends in birds of Québec using ÉPOQ. Pages 229-236 in D.M. Finch and P.W. Stangel, eds. *Status and management of Neotropical migratory birds.* U.S. Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** population trends; state summary; checklist monitoring program; Canada

Davis, C.V. 1969. A 1968 Breeding Bird Survey for Montana. *Montana Acad. Sci. Proc.* 29:1-12. **Key Words:** state summary

DeSante, D.F., and T.L. George. 1994. Population trends in the landbirds of western North America. Pages 173-190 in J.R. Jehl and N.K. Johnson, eds. *A century of avifaunal change in western North America.* *Studies in Avian Biol.* No. 15. **Key Words:** regional analysis; population trends; land birds; guild analysis

DesGranges, J.-L. 1987. Forest birds as biological indicators of the progression of maple dieback in Quebec. Pages 249-257 in A.W. Diamond and F.L. Filion, eds. *The value of birds.* ICBP Tech. Publ. No. 6. Cambridge, UK. **Key Words:** woodland birds; community ecology; northern hardwood forests; population trends; bird-habitat relations

Dolbeer, R.A., and R.A. Stehn. 1979. Population trends of blackbirds and starlings in North America, 1966-1976. U.S. Fish Wildl. Serv. Spec. Sci. Rep.--Wildl., No. 214. 99 p. **Key Words:** population trends; regional analysis; geographic range; European Starling; *Sturnus vulgaris*; Red-winged Blackbird; *Agelaius phoeniceus*; Common Grackle; *Quiscalus quiscula*; Brown-headed Cowbird; *Molothrus ater*

Donovan, T.M., and C.H. Flather. 2002. Relationships among North American songbird trends, habitat fragmentation, and landscape occupancy. *Ecological Applications* 12:364-374. **Key Words:** habitat fragmentation; habitat change; forest birds; passerines; landscape ecology

Downes, C.M., and E. Dunn. 1994. Population trends from the Breeding Bird Survey. *Picoides* 7:18-20. **Key Words:** population trends; Canada; regional analysis

Downes, C.M., and B.T. Collins. 1996. The Canadian Breeding Bird Survey, 1966-1994. *Can. Wildl. Serv. Prog. Notes* No. 210. 36 pp. **Key Words:** population trends; Canada; regional analysis

Droege, S. and J.R. Sauer. 1989. North American Breeding Bird Survey annual summary, 1988. USDOI, Fish and Wildlife Service, Biological Report 89(13). 16 pp. **Key Words:** population trends; guild summary; regional summary

Droege, S. 1990. The North American Breeding Bird Survey. Pages 1-4 in J.R. Sauer and S. Droege, eds. *Survey designs and statistical methods for the estimation of avian population trends.* USDOI, Fish and Wildlife Service, Biological Rep. 90(1). **Key Words:** survey overview

Droege, S., and J.R. Sauer. 1990. North American Breeding Bird Survey annual summary, 1989. USDOI, Fish and Wildlife Service Biological Rept. 90(8). 22 pp. **Key Words:** population trends; guild summary; regional summary

Droege, S., and J.R. Sauer. 1990. Northern Bobwhite, Gray Partridge, and Ring-necked Pheasant population trends (1966-1988) from the North American Breeding Bird Survey. Pages 2-20 in K.E. Church, R.E. Warner, and S.J. Brady, eds. *Perdix V: Gray Partridge and Ring-necked Pheasant workshop.* Kansas Dept. Wildl. and Parks, Emporia. **Key Words:** population trends; *Colinus virginianus*; *Perdix perdix*; *Phasianus colchicus*

Droege, S., and J.R. Sauer. 1994. Are more North American species decreasing than increasing? Pages 297-306 in E.J.M. Hagemeyer and T.J. Verstrael, eds. *Bird Numbers 1992: Distribution, monitoring and ecological aspects.* Statistics Netherlands, Voorburg/Haarlem. **Key Words:** guild analysis; population trends; regional analysis

Dunn, E.H., C.M. Downes, B.T. Collins. 2000. The Canadian Breeding Bird Survey, 1967-1998. *Canadian Wildlife Service Progress Notes* 216:1-40. **Key Words:** Canada; population trends; regional analysis

Dunn, E.H., J. Larivee, A. Cyr. 2001. Site-specific observation in the breeding season improves the ability of checklist data to track population trends. *J. Field Ornithology* 72:547-555. **Key Words:** checklist; Quebec; survey methods; migration

Ealey, D., B. Dale, R. Dickson, and J. Park. 1994. Hey buddy, can you spare the time? Motivation and the breeding bird survey participant in Alberta. *Alberta Nat.* 24:65-69.

Key Words: survey overview; state summary

Earnst, S.L., and B.A. Andres. 1996. Population trends of breeding birds in Ohio. *Ohio Biol. Surv. Misc. Contrib. No. 3.* 125 pp. **Key Words:** population trends, state summary, relative abundance; analytical methods

Erskine, A.J. 1970. The Breeding Bird Survey in Canada, 1966-1969. *Can. Wildl. Serv. Prog. Notes No. 15.* 19 p. **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1971. The co-operative Breeding Bird Survey in Canada, 1970. *Can. Wildl. Serv. Prog. Notes. No. 21.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1972. The co-operative Breeding Bird Survey in Canada, 1971. *Can. Wildl. Serv. Prog. Notes. No. 26.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1973. The co-operative Breeding Bird Survey in Canada, 1972. *Can. Wildl. Serv. Prog. Notes No. 32.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1974. The co-operative Breeding Bird Survey in Canada, 1973. *Can. Wildl. Serv. Prog. Notes No. 38.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1974. Status of breeding bird census work in Canada: A brief summary. *Acta Ornith.* 14:166-168. **Key Words:** survey overview

Erskine, A.J. 1975. The co-operative Breeding Bird Survey in Canada, 1974. *Can. Wildl. Serv. Prog. Notes No. 45.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1976. The co-operative Breeding Bird Survey in Canada, 1975. *Can. Wildl. Serv. Prog. Notes No. 60.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1977. The co-operative Breeding Bird Survey in Canada, 1976. *Can. Wildl. Serv. Prog. Notes No. 74.* **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1978. The first ten years of the cooperative breeding bird survey in Canada. Canadian Wildlife Service Report Ser. 42:1-61. **Key Words:** population trends; Canada; regional analysis

Erskine, A.J. 1979. Estimates of species populations from census and atlas data. Pages 254-263 in H. Oelke, ed. Proceedings 6th International Conference on Bird Census Work. Göttingen, Germany. **Key Words:** population estimates; Canada; Breeding Bird Census; European Starling; *Sturnus vulgaris*; Red-winged Blackbird; *Agelaius phoeniceus*; White-throated Sparrow; *Zonotrichia albicollis*

Erskine, A.J., B.T. Collins, and J.W. Chardine. 1990. The cooperative breeding bird survey in Canada, 1988. Can. Wildl. Serv. Prog. Notes No. 188. **Key Words:** population trends; Canada; regional analysis

Erskine, A.J., Collins, B.T., E. Hayakawa, and C.M. Downes. 1992. The cooperative Breeding Bird Survey in Canada, 1989-91. Can. Wildl. Serv. Prog. Note No. 199. **Key Words:** population trends; Canada; regional analysis

Evans, K.E. 1975. Breeding Bird Survey report. Bluebird 42:6. **Key Words:** state summary; Missouri

Evans, K.E., and D. Bystrak. 1974. Breeding Bird Survey: a request for assistance. Bluebird 41:5-8. **Key Words:** state summary; Missouri

Evans, K.E., and D.K. Dawson. 1976. The Breeding Bird Survey in Missouri: 1967 to 1975. Bluebird 43:12-22. **Key Words:** state summary

Faanes, C.A. and D. Bystrak. 1981. The role of observer bias in the North American Breeding Bird Survey. Pages 353-359 in C.J. Ralph and J.M. Scott, eds. Estimating numbers of terrestrial birds. Studies in Avian Biology No. 6. **Key Words:** observer bias; survey methods; hearing loss; bird identification expertise; training

Falardeau, G., and J.-L. Desgranges. 1991. Habitat preference and recent fluctuations in populations of farmland birds in Quebec. Can. Field-Nat. 105:469-482. (French, with English summary) **Key Words:** population trends; habitat selection; farmland birds; demographic tendencies; Canada; bird-habitat relations

Finney, G.H., K.E. Freemark, and A.J. Erskine. 1978. The co-operative Breeding Bird Survey in Canada, 1977. Can. Wildl. Serv. Prog. Notes No. 84. 21 p. **Key Words:** population trends; Canada; regional analysis

Flather, C.H., and J.R. Sauer. 1996. Using landscape ecology to test hypotheses about large-scale abundance patterns in migratory birds. Ecology 77:28-35. **Key Words:**

landscape ecology; Neotropical migrants; forest fragmentation; land-use impacts; spatial and temporal correlations

Fleury, B.E., and T.W. Sherry. 1995. Long-term population trends of colonial wading birds in the southern United States: the impact of crayfish aquaculture on Louisiana populations. *Auk* 112:613-632. **Key Words:** population trends; colonial waterbirds; aquaculture; foraging ecology; prey availability; habitat availability

Freemark, K.E., C.R. Cooper, G.H. Finney, and A.J. Erskine. 1979. The cooperative Breeding Bird Survey in Canada, 1978. *Can. Wildl. Serv. Rep. Ser.* 42. 61 p. **Key Words:** population trends; Canada; regional analysis

Freemark, K.E. and D.A. Kirk. 2001. Birds on organic and conventional farms in Ontario: partitioning effects of habitat and practices on species composition. *Biological Conservation* 101:337-350. **Key Words:** habitat change; agriculture; species richness; Ontario; abundance

Fuller, M.R., D. Bystrak, C.S. Robbins, and R.M. Patterson. 1987. Trends in American Kestral counts from the North American Breeding Bird Survey. *Raptor Res. Rep.* 6:22-27. **Key Words:** population trends; *Falco sparverius*

Geissler, P.H. 1984. Estimation of animal population trends and annual indices from a survey of call-counts or other indications. *Proc. Am. Stat. Assoc., Sect. on Surv. Res. Methods* 1984:472-477. **Key Words:** analytical methods; route regression; counts

Geissler, P.H. and B.R. Noon. 1981. Estimates of avian population trends from the North American Breeding Bird Survey. Pages 42-51 in C.J. Ralph and J.M. Scott, eds. Estimating numbers of terrestrial birds. *Studies in Avian Biology* No. 6. **Key Words:** .analytical methods; parametric analysis; non-parametric analysis; base year method; geometric mean; population trend estimates

Geissler, P.H., and W.A. Link. 1988. Bias of animal population trend estimates. Pages 755-759 in E.J. Wegman, D.T. Gantz, and J.J. Miller, eds. Computing science and statistics: proceedings of the 20th symposium on the interface. *Am. Stat. Assoc.*, Alexandria, VA. **Key Words:** analytical methods; population trends

Geissler, P.H. and J.R. Sauer. 1990. Topics in route-regression analysis. Pages 54-57 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. *USDOI, Fish and Wildlife Service Biological Report* 90(1). **Key Words:** analytical methods; route regression; covariables; variance estimation

Goodpasture, K.A. 1968. Summer occurrence of Blue Grosbeaks in Middle Tennessee.

Migrant 39:1-3. **Key Words:** geographic range; *Guiraca caerulea*

Goodpasture, K.A. 1968. The 1967 Breeding Bird Surveys--middle Tennessee. Migrant 39:4-5. **Key Words:** state summary

Gossmann, M. 1974. 1973 Breeding Bird Survey. Illinois Audubon Bull. 170:12. **Key Words:** state summary

Grubb, T.C, Jr., R.A. Mauck, and S.L. Earnst. 1994. On no-chickadee zones in midwestern North America: evidence from the Ohio Breeding Bird Atlas and the North American Breeding Bird Survey. Auk 111:191-197. **Key Words:** geographic range; forest cover patterns; bird-habitat relations; Black-capped Chickadee; *Parus atricapillus*; Carolina Chickadee; *Parus carolinensis*

Hagan, J.N., III, T.L. Lloyd-Evans, J.L. Atwood, and D.S. Wood. 1992. Long-term changes in migratory landbirds in the northeastern United States: evidence from migration capture data. Pages 115-130 in J.M. Hagan, III, and D.W. Johnston, eds. Ecology and conservation of Neotropical migrant landbirds. Smithsonian Institution Press, Washington, D.C. **Key Words:** population trends; Neotropical migrants; regional summary; migration monitoring; migration counts;

Hagan, J.M., III. 1993. Decline of the Rufous-sided Towhee in the eastern United States. Auk 110: 863-874. **Key Words:** population trends; *Pipilo erythrophthalmus*; trends in successional/edge habitats

Hall, G.A. 1967. The West Virginia Breeding Bird Survey, 1966. Redstart 34:66-70. **Key Words:** state summary

Hanowski, J.M., and G.J. Niemi. 1995. A comparison of on-road and off-road bird counts: do you need to go off road to count birds accurately? Jour. Field Ornithol. 66:469-483. **Key Words:** roadside bias; woodland birds; survey methods; relative abundance; species richness

Hebert, V. 1967. New Hampshire Breeding Bird Survey, 1966. New Hampshire Audubon Quart. 20:27-28. **Key Words:** state summary

Heijl, S.J. 1994. Human-induced changes in bird populations in coniferous forests in western North America during the past 100 years. Pages 232-246 in J.R. Jehl, Jr., and N.K. Johnson, eds. A century of avifaunal change in western North America. Studies in Avian Biol. No. 15. **Key Words:** population trends; regional analysis; woodland birds; Neotropical migrants; permanent residents; bird-habitat relations

Henderson, C.L. 1979. Breeding birds in Minnesota, 1975-79: abundance, distribution

and diversity. *Loon* 53:11-49. **Key Words:** geographic range; state summary; relative abundance

Hepinstall, J.A., and S.A. Sader. 1997. Using Bayesian statistics, thematic mapper satellite imagery, and breeding bird survey data to model bird species probability of occurrence in Maine. *Photogrammetric Engineering and Remote Sensing* 63: 1231-1237. **Key Words:** landscape ecology; satellite imagery; bird-habitat relations; geographic range; Bayes' Theorem; distribution modeling

Herkert, J.R. 1995. An analysis of midwestern breeding bird population trends: 1966-1993. *Am. Midland Natur.* 134:41-50. **Key Words:** population trends; regional analysis

Herkert, J.R. 1997. Bobolink *Dolichonyx oryzivorus* population decline in agricultural landscapes in the midwestern U.S.A. *Biological Conservation* 80:107-112. **Key Words:** population trends; regional analysis; grassland birds; neotropical migrants

Herkert, J.R. 1998. The influence of the CRP on grasshopper sparrow population trends in the mid-continental United States. *Wildlife Society Bull.* 26:227-231. **Key Words:** population trends; regional analysis; Conservation Reserve Program; grassland birds; Grasshopper Sparrow; *Ammodramus savannarum*; neotropical migrants

Hess, P., and T. Floyd. 1994. Neotropical migrants in Pennsylvania: evidence of absence or absence of evidence? *Pennsylvania Birds* 8:201-203. **Key Words:** population trends; state summary; Neotropical migrants; short-distance migrants; permanent residents

Holmes, R.T., and T.W. Sherry. 1988. Assessing population trends of New Hampshire forest birds: local vs. regional patterns. *Auk* 105:756-768. **Key Words:** woodland birds; state summary; Neotropical migrants; local population changes

Holmes, R.T. and T.W. Sherry. 2001. Thirty-year bird population trends in an unfragmented temperate deciduous forest: importance of habitat change. *Auk* 118:589-609. **Key Words:** New Hampshire; population trends; habitat change; local population change; abundance

Hoover, J.P., and M.C. Brittingham. 1993. Regional variation in cowbird parasitism of Wood Thrushes. *Wilson Bull.* 105:228-238. **Key Words:** brood parasitism rates; Brown-headed Cowbird; *Molothrus ater*; *Hylocichla mustelina*; relative abundance

Horn, D.J., S.E. FairBairn, R.J. Hollis. 1999. Comparison of Iowa Winter Bird Feeder Survey and Breeding Bird Survey population trends. *Iowa Bird Life* 69:85-88. **Key Words:** Iowa; survey methods; feeder watch; population trends

Houston, C.S., and J.K. Schmutz. 1999. Changes in bird populations on canadian grasslands. Pages 87-94 in P.D. Vickery and J.R. Herkert, eds. Ecology and conservation of grassland birds of the western hemisphere. Studies in Avian Biology 19. **Key Words:** grassland birds; Canada; Alberta; Manitoba; Saskatchewan; agriculture; population trends

Howell, J.C. 1966. Tennessee's participation in the 1966 Breeding Bird Survey. Migrant 37:71-72. **Key Words:** state summary

Howell, J.C. 1968. The 1967 Breeding Bird Surveys--east Tennessee. Migrant 39:6-9. **Key Words:** state summary

Hunter, W.C., D.N. Pashley, and R.E.F. Escano. 1993. Neotropical migratory landbird species and their habitats of special concern within the southeast region. Pages 159-171 in D.M. Finch and P.W. Stangel, eds. Status and management of Neotropical migratory birds. USDA Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** guild summary; Neotropical migrants; regional summary; population trends; conservation priorities; species ranking criteria

Hunter, W.C., M.F. Carter, D.N. Pashley, and K. Barker. 1993. The Partners in Flight species prioritization scheme. Pages 109-119 in D.M. Finch and P.W. Stangel, eds. Status and management of Neotropical migratory birds. USDA Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** conservation priorities; species ranking criteria; population trends; Neotropical migrants

Husack, M.S., and T.C. Maxwell. 2000. A review of 20th century range expansion and population trends of the Golden-fronted Woodpecker (*Melanerpes aurifrons*): historical and ecological perspectives. Texas J. of Science 52:275-284. **Key Words:** Golden-fronted Woodpecker; *Melanerpes aurifrons*; population trend; geographic range

Hussell, D.J.T., M.H. Mather, and P.H. Sinclair. 1992. Trends in numbers of tropical- and temperate-wintering migrant landbirds in migration at Long Point, Ontario, 1961-1988. Pages 101-114 in J.M. Hagan, III, and D.W. Johnston, eds. Ecology and conservation of Neotropical migrant landbirds. Smithsonian Institution Press, Washington, D.C. **Key Words:** population trends; Neotropical migrants; temperate-wintering birds; migration monitoring; Canada; migration counts

Hutto, R.L. 1988. Is tropical deforestation responsible for the reported declines in Neotropical migrant populations? Am. Birds 42:375-379. **Key Words:** population trends; Neotropical migrants; local population change; forest fragmentation; reforestation

Hutto, R.L., S.J. Hejl, J.F. Kelly, and S.M. Pletschet. 1995. A comparison of bird detection rates derived from on-road vs. off-road point counts in northern Montana. Pages 103-110 in C.J. Ralph, J.R. Sauer, and S. Droege, eds. Monitoring bird

populations by point counts. USDSA, Forest Service Gen. Tech. Rep. PSW-GTR-149. Albany, CA. **Key Words:** roadside bias; woodland birds; survey methods; species richness; relative abundance

Igl, L.D., and D.H. Johnson. 1997. Changes in breeding bird populations in North Dakota: 1967 to 1992-93. *Auk* 114:74-92. **Key Words:** state summary; statewide population estimates; population trends; grassland birds

Imhof, T.A. 1969. Breeding Bird Survey, 1968. *Alabama Birdlife* 17:12. **Key Words:** state summary; Alabama

Jackson, J.P. 1980. Observations on the Breeding Bird Survey. *Bluebird* 47:37-38. **Key Words:** state summary; Missouri

James, F.C., C.E. McCulloch, and C.E. Wolfe. 1990. Methodological issues in the estimation of trends in bird populations with an example: Pine Warbler. Pages 84-97 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. USDOJ, Fish and Wildlife Service Biological Report 90(1). **Key Words:** analytical methods; nonlinear regression; population trends; *Dendroica pinus*; smoothing; LOESS

James, F.C., D.A. Wiedenfeld, and C.E. McCulloch. 1992. Trends in breeding populations of warblers: declines in the southern highlands and increases in the lowlands. Pages 43-56 in J.M Hagan, III and D.W. Johnson, eds. Ecology and conservation of Neotropical migrant landbirds. Smithsonian Institution Press, Washington, D.C. **Key Words:** population trends; regional summary; southeastern United States; nonlinear regression; relative abundances

James, F.C., and C.E. McCulloch. 1995. The strength of inferences about causes of trends in populations. Pages 40-51 in T.E. Martin and D.M Finch, eds. Ecology and management of Neotropical migratory birds. Oxford Univ. Press, New York. **Key Words:** population trends; Neotropical migrants; quasi-experimental design; causal analysis

James, F.C., C.E. McCulloch, and D.A. Wiedenfeld. 1996. New approaches to the analysis of population trends in land birds. *Ecology* 77:13-27. **Key Words:** population trends; analytical methods; nonlinear regression; warblers; Blue-winged Warbler; *Vermivora pinus*; Ovenbird; *Sieurus aurocapillus*; Neotropical migrants;

Janssen, R.B. 1979. Minnesota Breeding Bird Surveys: a summary. *Loon* 51:64-70. **Key Words:** state summary

Janssen, R.B. 1991. Breeding bird survey trends in Minnesota--1966-1989. *Loon*

62:201. **Key Words:** state summary

Jobin, B., J.-L. DesGranges, N. Plante, and C. Boutin. 1994. Relations entre la modification du paysage rural, les changements de pratiques agricoles et les fluctuations des populations d'oiseaux champêtres du sud du Québec. Can Wildl. Serv. Tech. Rep. Ser. No. 191. 95 pp. **Key Words:** population trends; agricultural landscapes; bird-habitat relations; Canada; grassland birds; landscape ecology

Jobin, B., J.-L. DesGranges, and C. Boutin. 1996. Population trends in selected species of farmland birds in relation to recent developments in agriculture in the St. Lawrence valley. Agric. Ecosyst. Environ. 57:103-116. **Key Words:** bird-habitat relations; population trends; agricultural landscapes; grassland birds; Québec; Canada; landscape ecology

Jobin, B., J.-L. DesGranges, and C. Boutin. 1996. Comparison of BBS and intensive surveys at selected BBS stops. Bird Populations 3:14-25. **Key Words:** survey methods; survey length; survey date; time of day; farmland birds; bird-habitat relations

Jones, K.B., A.C. Neale, M.S. Nash, K.H. Riitters, J.D. Wickham, R.V.O'Neill, V. Remortel. 2000. Landscape correlates of breeding bird richness across the United States mid-atlantic region. Environmental Monitoring and Assessment 63:159-174. **Key Words:** bird-habitat relations, species richness, mid-atlantic region, landscape ecology

Keitt, T.H., and H.E. Stanley. 1998. Dynamics of North American breeding bird populations. Nature 393: 257-260. **Key Words:** community ecology; dynamics of species assemblages; changes in population abundance; local species lifetimes

Keller, C.E. 1972. Middletown Breeding Bird Survey 1966-1972. Indiana Audubon Quart. 50:96-100. **Key Words:** geographic range; route summary; relative abundance

Keller, C.M.E., and M.R. Fuller. 1994. Comparison of birds detected from roadside and off-road point counts in Shenandoah National Park. Pages 111-115 in C.J. Ralph, J.R. Sauer, and S. Droege, eds. Monitoring bird populations by point counts. USDA, Forest Service Gen. Tech. Rep. PSW-GTR-149. Albany, CA. **Key Words:** roadside bias; woodland birds; survey methods; species richness; relative abundance

Keller, C.M.E., and J.T. Scallan. 1999. Potential roadside biases due to habitat changes along Breeding Bird Survey routes. The Condor: 101:50-57. **Key Words:** survey methods; habitat change; roadside bias; Maryland; Ohio;

Kendall, W.L., B.G. Peterjohn, and J.R. Sauer. 1996. First-time observer effects in the North American Breeding Bird Survey. The Auk 113:823-829. **Key Words:** observer bias; analytical methods; survey methods; counts; observer training

- Kingery, H.E.** 1990. Colorado Breeding Bird Surveys. *Colo. Field Ornithol.* 24:95.
Key Words: state summary
- Kirk, D.A., A.W. Diamond, A.R. Smith, G.E. Holland, and P. Chytk.** 1997.
Population changes in boreal forest birds in Saskatchewan and Manitoba. *Wilson Bull.* 109:1-27. **Key Words:** population trends; woodland birds; Neotropical migrants; Canada; forest fragmentation
- Kirk, D.A., and C. Hyslop.** 1998. Population status and recent trends in Canadian raptors: a review. *Biol. Cons.* 83: 91-118. **Key Words:** population trends; status; Canada; hawks; owls; vultures; eagles; falcons; Osprey
- Klingensmith, C.** 1970. A population index of breeding birds in Allegany County. *Kingbird* 20:163-168. **Key Words:** geographic range; relative abundance; New York; breeding index
- Knopf, F.L.** 1994. Avian assemblages on altered grasslands. Pages 247-257 in J.R. Jehl and N.K. Johnson, eds. *A century of avifaunal change in western North America. Studies in Avian Biol. No. 15.* **Key Words:** guild analysis; regional analysis; grassland birds; Great Plains; biological diversity; grassland habitat alterations
- Knopf, F.L.** 1995. Declining grassland birds. Pages 296-298 in E.T. LaRoe, G.S Farris, C.E. Puckett, P.D. Doran, and M.J. Mac, eds. *Our living resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems.* U.S. Dept. Interior, National Biological Service, Washington, D.C. **Key Words:** guild analysis; population trends; grassland birds; Great Plains
- Kridelbaugh, A.L.** 1981. Population trend, breeding and wintering distribution of Loggerhead Shrikes (*Lanius ludovicianus*) in Missouri. *Trans. Missouri Acad. Sci.* 15:111-119. **Key Words:** population trend; Loggerhead Shrike; geographic range
- Lang, A.L.** 1991. Status of the American Coot, *Fulica americana*, in Canada. *Can. Field-Nat.* 105:530-541. **Key Words:** population trends; habitat loss; wetland habitat trends; Canada
- Legrand, H.E., Jr.** 1996. Summary of twenty-nine years of breeding bird survey results. *Chat* 60:16-23. **Key Words:** state summary; North Carolina
- Linehan, J.T.** 1965. That new Breeding Bird Survey. *Delmarva Ornithol.* 2:27-28. **Key Words:** state summary; Delaware
- Linehan, J.T.** 1967. Population changes in Delaware--from the Breeding Bird Survey, 1966. *Delmarva Ornithol.* 4:1-5. **Key Words:** state summary

Link, W.A., R.J. Barker, J.R. Sauer, and S. Droege. 1994. With-in site variability in surveys of wildlife populations. *Ecology* 75:1097-1108. **Key Words:** survey methods; population trends; within-site variability; indices; correlation

Link, W.A. and J.R. Sauer. 1994. Estimating equations estimates of trends. *Bird Populations* 2:23-32. **Key Words:** analytical methods; route regression

Link, W.A., and J.R. Sauer. 1995. Estimation of empirical mixing distributions in summary analyses. *Biometrics* 51:810-821. **Key Words:** analytical methods; summary analysis; mixing distributions; Empirical Bayes; bootstrap

Link, W.A., and J.R. Sauer. 1996. Extremes in ecology: avoiding the misleading effects of sampling variation in summary analyses. *Ecology* 77:1633-1640. **Key Words:** analytical methods; Bayes estimation; constrained Bayes estimation; extreme values; sampling variation

Link, W.A., and J.R. Sauer. 1997. Estimation of population trajectories from count data. *Biometrics* 53: 63-72. **Key Words:** analytical methods; quasi-likelihood; Dirichlet compound multinomial;

Link, W.A., and J.R. Sauer. 1997. "New approaches to the analysis of population trends in land birds": comment. *Ecology* 78: 2632-2634. **Key Words:** analytical methods; route regression; nonlinear regression;

Link, W.A., and J.R. Sauer. 1998. Estimating population change from count data: application to the North American Breeding Bird Survey. *Ecol. Applications* 8: 258-268. **Key Words:** analytical methods; generalized linear models; Carolina Wren; *Thryothorus ludovicianus*

Marzluff, J.M., R.B. Boone, and G.W. Cox. 1994. Historical changes in populations and perceptions of native pest bird species in the West. Pages 202-220 in J.R. Jehl, Jr., and N.K. Johnson, eds. A century of avifaunal change in western North America. *Studies in Avian Biol.* No. 15. **Key Words:** population trends; pest birds; geographic range; regional analysis; Northern Flicker; *Colaptes auratus*; House Finch; *Carpodacus mexicanus*; Canada Goose; *Branta canadensis*; Ring-billed Gull; *Larus delawarensis*; Western Scrub-Jay; *Aphelocoma californica*

Maurer, B.A. 1994. Geographical population analysis: tools for the analysis of biodiversity. Blackwell Scientific Pub., Oxford. 130 p. **Key Words:** community ecology; geographic range; relative abundance; analytical methods; spatial distribution

Maurer, B.A., and S.G. Heywood. 1993. Geographic range fragmentation and abundance in Neotropical migratory birds. *Conserv. Biol.* 7:501-509. **Key Words:**

geographic range; spatial distribution; relative abundance

Maurer, B.A., and M.-A. Villard. 1994. Population density: geographic variation in abundance of North American birds. *National Geographic Res. Explor.* 10:306-317. **Key Words:** relative abundance; geographic range; spatial distribution

McCulloch, C.E., F.C. James, and D.A. Wiedenfeld. 1997. New approaches to the analysis of population trends in land birds: reply. *Ecology* 78: 2635-2637. **Key Words:** analytical methods; route regression; nonlinear regression

Mehlman, D.W. 1997. Change in avian abundance across the geographic range in response to environmental change. *Ecol. Applications* 7:614-624. **Key Words:** geographic range; range dynamics; climate change; abundance change; Carolina Wren, *Thryothorus ludovicianus*; Eastern Bluebird; *Sialia sialis*; Field Sparrow; *Spizella pusilla*

Mellon, R. 1994. Neotropical migrants in Pennsylvania. *Pennsylvania Birds* 8:2-9. **Key Words:** state summary; population trends; Neotropical migrants; woodland birds

Monroe, B.L., Jr. 1967. Dickcissel populations in southwestern Michigan. *Jack-Pine Warbler* 45:124-127. **Key Words:** geographic range; relative abundance; *Spiza americana*

Monroe, B.L., Jr. 1970. 1969 Kentucky summer Breeding Bird Survey. *Kentucky Warbler* 46:43-45. **Key Words:** state summary

Monroe, B.L., Jr. 1975. The Kentucky summer Breeding Bird Survey: a nine year summary. *Kentucky Warbler* 51:39-45. **Key Words:** state summary

Monroe, B.L., Jr. 1978. Analysis of Kentucky's breeding birds: declining species. *Kentucky Warbler* 54:19-26. **Key Words:** state summary; population trends

Monroe, B.L., Jr. 1979. Analysis of Kentucky's breeding birds: increasing species. *Kentucky Warbler* 55:23-28. **Key Words:** state summary; population trends

Moses, L.E. and D. Rabinowitz. 1990. Estimating (relative) species abundance from route counts of the Breeding Bird Survey. Pages 71-79 in J. R. Sauer and S. Droege, eds. *Survey designs and statistical methods for the estimation of avian population trends.* USDOI, Fish and Wildlife Service Biological Rep. 90(1). **Key Words:** analytical methods; relative abundance; missing data; counts; smoothing

M.T. Murphy. 2001. Habitat-specific demography of a long-distance, neotropical migrant bird, the Eastern Kingbird. *Ecology* 82:1304-1318. **Key Words:** Eastern Kingbird; *Tyrannus tyrannus*; habitat relations; demography

- Nichols, J.D., T. Boulinier, J.E. Hines, K.H. Pollock, and J.R. Sauer.** 1998. Estimating rates of local species extinction, colonization, and turnover in animal communities. *Ecological Applications* 8:1213-1225. **Key Words:** analytical methods; species richness; capture-recapture models; community dynamics; animal community ecology
- Niemi, G., A. Lima, J. Hanowski, and L. Pfannmuller.** 1996. Recent trends of breeding birds in Minnesota and Minnesota forested regions 1966-1993. *The Loon* 67: 191-201. **Key Words:** population trends; forested landscapes; guild analysis; bird-habitat relations
- O'Connor, R.J.** 1992. Population variation in relation to migrancy status in some North American birds. Pages 64-76 in J.M Hagan, III and D.W. Johnson, eds. *Ecology and conservation of Neotropical migrant landbirds*. Smithsonian Institution Press, Washington, D.C. **Key Words:** Neotropical migrants; resident species; population dynamics; density-dependent regulation;
- O'Connor, R.J., M.T. Jones, R.B. Boone, and T.B. Lauber.** 1999. Linking continental climate, land use, and land patterns with grassland bird distribution across the coterminus United States. Pages 45-59 in P.D. Vickery and J.R. Herkert, eds. *Ecology and conservation of grassland birds of the western hemisphere*. Studies in Avian Biology 19. **Key Words:** grassland birds; analytical methods; landscape ecology; climate; regression trees; area sensitivity; agriculture
- Olson, T.E., C.E. Braun, and R.A. Ryder.** 1983. Cooing activity and nesting of mourning doves in northeastern Colorado. *Southwest. Nat.* 28:335-340. **Key Words:** breeding behavior; breeding biology; *Zenaida macroura*; counts
- Page, G.W., and R.E. Gill, Jr.** 1994. Shorebirds in western North America: late 1800s to late 1900s. Pages 147-160 in J.R. Jehl, Jr., and N.K. Johnson, eds. *A century of avifaunal change in western North America*. Studies in Avian Biol. No. 15. **Key Words:** population trends; regional analysis; status; geographic range; guild analysis
- Paige, L.C.** 1990. Population trends of songbirds in western North America. M.S. Thesis, Univ. of Montana. **Key Words:** population trends; regional summary; guild summary; Neotropical migrants
- Pardieck, K.L., and J.R. Sauer.** 2000. The 1995-1999 summary of the North American Breeding Bird Survey. *Bird Populations* 5:30-48. **Key Words:** population trends; guild summary; regional summary
- Park, J.L.** 1988. The Breeding Bird Survey in Alberta, 1968-87. *Alberta Nat.* 18:53-58. **Key Words:** state summary

Park, J.L. 1990. Breeding Bird Survey report, 1988-1989. *Alberta Nat.* 20:89-92. **Key Words:** state summary; Alberta

Park, J., and D. Ealey. 1993. A quarter century of a quarter past four in the morning--the Breeding Bird Survey in Alberta. *Alberta Nat.* 23:20-24. **Key Words:** state summary

Peterjohn, B.G. 1992. Use of Breeding Bird Survey data by atlas projects. Pages 27-32 in A.T. Crignan, H. Kingery, and D. Wills, eds. Proceedings of the fourth Breeding Bird Atlas conference. Denver, CO. **Key Words:** Breeding Bird Atlas; geographic range; relative abundance

Peterjohn, B.G. 1994. The North American Breeding Bird Survey. *Birding* 26:385-399. **Key Words:** survey overview

Peterjohn, B.G. 2001. Some considerations on the use of ecological models to predict species geographic distributions. *Condor* 103:661-663. **Key Words:** GARP; analytical methods; species distribution;

Peterjohn, B.G. and J.R. Sauer. 1993. North American Breeding Bird Survey annual summary 1990-1991. *Bird Populations* 1:52-67. **Key Words:** population trends; guild summary; regional summary

Peterjohn, B.G. and J.R. Sauer. 1994. Population trends of woodland birds from the North American Breeding Bird Survey. *Wildlife Society Bull.* 22:155-164. **Key Words:** population trends; guild summary;

Peterjohn, B.G. and J.R. Sauer. 1995. Population trends of the Loggerhead Shrike from the North American Breeding bird Survey. Pages 117-121 in R. Yosef and F.E. Lohrer, eds. Shrikes (Laniidae) of the world: biology and conservation. *Proc. Western Foundation Vertebrate Zoology* 6(1). **Key Words:** population trends; *Lanius ludovicianus*

Peterjohn, B.G., and J.R. Sauer. 1995. Purple Martin population trends from the North American Breeding Bird Survey, 1966-1994. *Purple Martin Update* 6:2-8. **Key Words:** population trends; *Progne subis*

Peterjohn, B.G., and J.R. Sauer. 1996. The 1994 and 1995 summary of the North American Breeding Bird Survey. *Bird Populations* 3:48-66. **Key Words:** population trends; guild summary; regional summary

Peterjohn, B.G., and J.R. Sauer. 1997. Population trends of Black Terns from the North American Breeding Bird Survey, 1966-1996. *Colonial Waterbirds* 20: 566-573. **Key Words:** population trends; *Chlidonias niger*

Peterjohn, B.G., and J.R. Sauer. 1999. Population status of North American grassland birds from the North American Breeding Bird Survey, 1966-1996. Pages 27-44 in P.D. Vickery and J.R. Herkert, eds. Ecology and conservation of grassland birds of the western hemisphere. Studies in Avian Biology 19. **Key Words:** grassland birds; population trends; guild summary; regional trends

Peterjohn, B.G., J.R. Sauer, and W.A. Link. 1994. The 1992 and 1993 summary of the North American Breeding Bird Survey. Bird Populations 2:46-61. **Key Words:** population trends; guild summary; regional summary

Peterjohn, B.G., J.R. Sauer, and S. Orsillo. 1995. Breeding Bird Survey: population trends 1966-92. Pages 17-21 in E.T. LaRoe, G.S. Farris, C.E. Puckett, P.D. Doran, and M.J. Mac (eds.). Our living resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems. U.S. Dept. Interior, National Biological Service, Washington, D.C. **Key Words:** population trends; regional summary; guild summary

Peterjohn, B.G., J.R. Sauer, and C.S. Robbins. 1995. Population trends from the North American Breeding Bird Survey. Pages 3-39 in T.E. Martin and D.M. Finch, eds. Ecology and management of Neotropical migratory birds. Oxford Univ. Press, New York, NY. **Key Words:** population trends; guild analysis; Neotropical migrants; comparison of analytical methods; Acadian Flycatcher, *Empidonax vireescens*; Wood Thrush; *Hylocichla mustelina*; Black-and-white Warbler; *Mniotilta varia*; Scarlet Tanager; *Piranga olivacea*

Peterson, A.T. 2001. Predicting species' geographic distributions based on ecological niche modeling. Condor 103:599-605. **Key Words:** analytical methods; species distributions; niche modeling

Price, J., S. Droege, and A. Price. 1995. The summer atlas of North American birds. Academic Press, San Diego, CA. 364 p. **Key Words:** geographic range; relative abundance; geographic patterns of abundance

Pulich, W. 1968. 1967 Breeding Bird Survey. Bull. Tex. Ornithol. Soc. 2:6. **Key Words:** state summary; Texas

Pyle, P., N. Nur, and D.F. DeSante. 1994. Trends in nocturnal migrant landbird populations at southeast Farallon Island, California, 1968-1992. Pages 58-74 in J.R. Jehl, Jr., and N.K. Johnson, eds. A century of avifaunal change in western North America. Studies in Avian Biol. No. 15. **Key Words:** population trends; migration; land birds; productivity

Raynor, G.S. 1976. Decrease in breeding Brown Thrashers and Rufous-sided Towhees

on central Long Island. *Kingbird* 26:190-193. **Key Words:** population trends; New York; *Toxostoma rufum*; *Pipilo erythrophthalmus*

Reid, W.W. 1996. Breeding Bird Survey--fifty 3-minute counts at one location. *Pennsylvania Birds* 10:46. **Key Words:** survey methods; repeated counts

Reynolds, R.E., T. L. Shaffer, J.R. Sauer, and B.G. Peterjohn. 1994. Conservation Reserve Program: benefit for grassland birds in the Northern Plains. *Trans. 59th North American Wildlife & Natural Resources Conf.*:328-336. **Key Words:** population trends; guild analysis; grassland birds; North Dakota; South Dakota; bird-habitat relations

Robbins, C.S. 1965. Fifty thousand birds recorded on Breeding Bird Survey. *Maryland Birdlife* 21:73-79. **Key Words:** state summary

Robbins, C.S. and W.T. Van Velzen. 1967. The Breeding Bird Survey, 1966. USDOI Migratory Bird Populations Station, Special Scientific Report--Wildlife No. 102. Washington, D.C. **Key Words:** regional summary; state summary; geographic range; relative abundance

Robbins, C.S. 1969. Four-year summary of the Breeding Bird Survey in Maryland. *Maryland Birdlife* 25:29-36. **Key Words:** state summary

Robbins, C.S., and W.T. Van Velzen. 1969. The Breeding Bird Survey, 1967 and 1968. *Bur. Sport Fisheries and Wildlife Special Scientific Report No. 124.* 107 pp. **Key Words:** regional summary; state summary; geographic range; relative abundance

Robbins, C.S., and W.T. Van Velzen. 1969. Progress report on the North American Breeding Bird Survey. Pages 22-30 in S. Svensson, ed. *Bird census work and environmental monitoring. Proc. 2nd Int. Conf. Bird Census. Bull Ecol. Res. Com. NR-9.* Lund, Sweden. **Key Words:** survey overview; relative abundance; regional summary

Robbins, C.S. 1974. Monitoring bird population trends. *Missouri Acad. Sci. Occ. Papers* 3:96-100. **Key Words:** population trends; state summary; Missouri; regional summary

Robbins, C.S., and W.T. Van Velzen. 1974. Progress report on the North American breeding bird survey. *Acta Ornithol.* 14:170-191. **Key Words:** survey overview; geographic range; relative abundance; population trends

Robbins, C.S. and A.J. Erskine. 1975. Population trends in nongame birds in North America. *Trans. N. Am. Wildl. Nat. Resour. Conf.* 40:288-293. **Key Words:** population trends; regional summary

Robbins, C.S. 1979. Effect of forest fragmentation on bird populations. Pages 198-212 in R.M. DeGraaf and K.E. Evans, eds. Proceedings of the workshop on management of northcentral and northeastern forests for nongame birds. USFS Gen. Tech. Rep. NC-51. Minneapolis, MN. **Key Words:** forest fragmentation; woodland birds; population trends; Neotropical migrants; Maryland; New Jersey; Worm-eating Warbler; *Helmitheros vermivorus*; guild summary; forest management

Robbins, C.S., D. Bystrak, and P.H. Geissler. 1979. Techniques and results of nongame bird monitoring in North America. Pages 82-91 in H. Oelke, ed. Proceedings 6th Int. Conf. Bird Census Work. West Germany. **Key Words:** analytical methods; route regression; weighting techniques; accumulated ratios; Winter Wren; *Troglodytes troglodytes*

Robbins, C.S. 1980. Effect of forest fragmentation on breeding bird populations in the Piedmont of the mid-Atlantic region. *Atlantic Nat.* 33:31-36. **Key Words:** forest fragmentation; woodland birds; Maryland; bird-habitat relations; population trends; Neotropical migrants

Robbins, C.S. 1981. Effect of time of day on bird activity. Pages 275-286 in C.J. Ralph and J.M. Scott, eds. Estimating numbers of terrestrial birds. *Studies in Avian Biol.* No. 6. **Key Words:** survey methods; seasonal activity patterns; daily activity patterns; winter surveys; counts

Robbins, C.S. 1981. Bird activity levels related to weather. Pages 301-310 in C.J. Ralph and J.M. Scott, eds. Estimating numbers of terrestrial birds. *Studies in Avian Biol.* No. 6. **Key Words:** survey methods; winter surveys; sky condition; temperature; wind; precipitation; counts

Robbins, C.S., D.A. Bystrak, and P.H. Geissler. 1986. The Breeding Bird Survey: its first fifteen years, 1965-1979. USDOI, Fish and Wildlife Service resource publication 157. Washington, D.C. **Key Words:** population trends; regional analysis; state summary; relative abundance; survey overview; survey methods

Robbins, C.S., S. Droege, and J.R. Sauer. 1989. Monitoring birds with Breeding Bird Survey and atlas data. *Ann. Zool. Fennici* 26:297-304. **Key Words:** Breeding Bird Atlas; geographic range; relative abundance; population trends

Robbins, C.S., J.R. Sauer, R.S. Greenberg, and S. Droege. 1989. Population declines in North American birds that migrate to the neotropics. *Proceedings National Academy Sciences USA* 86:7658-7662. **Key Words:** population trends; Neotropical migrants; regional analysis; eastern North America; guild analysis

Robbins, C.S., J.W. Fitzpatrick, and P.B. Hamel. 1992. A warbler in trouble:

Dendroica cerulea. Pages 549-562 in J.M. Hagan, III, and D.W. Johnston, eds. Ecology and conservation of Neotropical migrant landbirds. Smithsonian Institution Press, Washington, D.C. **Key Words:** population trends; Cerulean Warbler; geographic distribution; breeding biology; winter ecology; conservation biology

Robbins, C.S., J.R. Sauer, and B.G. Peterjohn. 1993. Population trends and management opportunities for Neotropical migrants. Pages 17-23 in D.M. Finch and P.W. Stangel, eds. Status and management of Neotropical migratory birds. USDA, Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** population trends; guild summary; Neotropical migrants

Robbins, S.D. 1971. Wisconsin breeding bird survey results: 1966-1970. Passenger Pigeon 33:115-136. **Key Words:** state summary

Robbins, S.D. 1977. The breeding bird survey in Wisconsin: 1966-1975. Passenger Pigeon 39:225-247. **Key Words:** state summary

Robbins, S.D. 1982. Wisconsin's breeding bird survey results: 1966-1980. Passenger Pigeon 44:97-120. **Key Words:** state summary

Robbins, S.D. 1995. B.B.S. equals beleaguered bobolinks and sparrows. Passenger Pigeon 57:67-75. **Key Words:** grassland birds; population trends; Wisconsin; guild analysis; *Dolichonyx oryzivorus*

Robbins, S.D., D.W. Sample, P.W. Rasmussen, and M.J. Mossman. 1996. The breeding bird survey in Wisconsin: 1966-1991. Passenger Pigeon 58:81-179. **Key Words:** state summary

Roberson, J.A. 1999. Central Management Unit Mourning Dove workshop. Texas Parks and Wildlife Dept. Final Report, 146 pp. Project no. TX AP-98-208W. **Key Words:** Mourning Dove; *Zenaida macroura*; survey methods;

Rotenberry, J.T., and S.T. Knick. 1995. Evaluation of bias in roadside point count surveys of passerines in shrubsteppe and grassland habitats in southwestern Idaho. Pages 99-101 in C.J. Ralph, J.R. Sauer, and S. Droege, eds. Monitoring bird populations by point counts. USDA, Forest Service Gen. Tech. Rep. PSW-GTR-149. Albany, CA. **Key Words:** roadside bias; survey methods; relative abundance; Western Meadowlark; *Sturnella neglecta*; Horned Lark; *Eremophila alpestris*; Brewer's Sparrow; *Spizella breweri*

Ryder, R.A. 1970. Colorado Breeding Bird Surveys, 1968 and 1969. Jour. Colorado-Wyoming Acad. Sci. 7:46-47. **Key Words:** state summary

Ryder, R.A. 1976. Some Colorado results from eight years of the North American Breeding Bird Survey. *Jour. Colorado-Wyoming Acad. Sci.* 8:71 Abstract. **Key Words:** state summary

Ryder, R.A. 1986. The North American Breeding Bird Survey: the first eighteen years in Colorado. *Colo. Field Ornithol.* 20:21 Abstract. **Key Words:** state summary

Sanzenbacher, P.M., and S.M. Haig. 2001. Killdeer population Trends in North America. *J. Field Ornithology* 72:160-169. **Key Words:** population trends; *Charadrius vociferus*; Killdeer

Sauer, J.R., M.K. Klimkiewicz, and S. Droege. 1988. Population trends of the Purple Martin in North America, 1966-1986. *Purple Martin Update* 1:4-6. **Key Words:** population trends; *Progne subis*

Sauer, J.R. 1990. Route-regression analysis of scissor-tailed flycatcher population trends. Pages 160-163 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. USDO, Fish and Wildlife Service Biological Report 90(1). **Key Words:** analytical methods; route regression; *Tyrannus forficatus*

Sauer, J.R., and S. Droege. 1990. Recent population trends of the Eastern Bluebird. *Wilson Bull.* 102:239-252. **Key Words:** population trends; *Sialia sialis*

Sauer, J.R., and S. Droege. 1990. Wood Duck population trends from the North American Breeding Bird Survey. Pages 225-231 in L.H. Frederickson, G.V. Burger, S.P. Havera, D.A. Graber, R.E. Kirby, and T.S. Taylor, eds. Proceedings of the 1988 North American Wood Duck Symposium. St. Louis, MO. **Key Words:** population trends; *Aix sponsa*; relative abundance; roadside survey methods

Sauer, J.R. and P.H. Geissler. 1990. Estimation of annual indices from roadside surveys. Pages 58-62 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. USDO, Fish and Wildlife Service Biological Report 90(1). **Key Words:** analytical methods; annual indices; residual distances; linear model; population trends;

Sauer, J.R., S. Droege, and D. Bystrak. 1991. Breeding Bird Survey and bird banding data: applications to raptor research and management. Pages 125-133 in B.G. Pendleton and D.L. Krahe, eds. Proceedings of the Midwest raptor management symposium and workshop. Natl. Wildl. Fed. Scien. Tech. Ser. No. 15. Washington, D.C. **Key Words:** geographic range; relative abundance; population trends

Sauer, J.R., and S. Droege. 1992. Geographic patterns in population trends of

Neotropical migrants in North America. Pages 26-42 in J.M. Hagan, III and D.W. Johnston, eds. Ecology and conservation of neotropical migrant landbirds. Smithsonian Institution Press, Washington, D.C. **Key Words:** population trends; guild summary; regional summary; bird-habitat relations; woodland birds; successional birds

Sauer, J.R., D.D. Dolton, and S. Droege. 1994. Mourning Dove population trend estimates from call-count and North American Breeding Bird surveys. *Jour. Wildlife Management* 58:506-515. **Key Words:** population trends; survey methods; Call-count Survey; *Zenaida macroura*; statistical methods

Sauer, J.R., and W.A. Link. 1999. Regional analysis of population trajectories from the North American Breeding Bird Survey. *Die Vogelwelt* 120:31-38. **Key Words:** regional analysis; statistical methods;

Sauer, J.R., and W.A. Link. 2002. Hierarchical modeling of population stability and species group attributes from survey data. *Ecology* 86:1743-1751. **Key Words:** analytical methods; Bayesian model; Markov Chain Monte Carlo method; population trends

Sauer, J.R., S. Orsillo, and B.G. Peterjohn. 1994. Population status and trends of grouse and prairie-chickens from the North American Breeding Bird Survey and Christmas Bird Count. *Trans. 59th North American Wildlife & Natural Resources Conf.:*439-448. **Key Words:** population trends; geographic range; relative abundance; Blue Grouse; *Dendragapus obscurus*; Spruce Grouse; *Dendragapus canadensis*; Ruffed Grouse; *Bonasa umbellus*; Sage Grouse; *Centrocercus urophasianus*; Sharp-tailed Grouse; *Tympanuchus phasianellus*; Greater Prairie-chicken; *Tympanuchus cupido*; Lesser Prairie-Chicken; *Tympanuchus pallidicinctus*

Sauer, J.R., G.W. Pendleton, and S. Orsillo. 1994. Mapping of bird distributions from point count surveys. Pages 151-160 in C.J. Ralph, J.R. Sauer, and S. Droege, eds. *Monitoring bird populations by point counts.* USDA, Forest Service Gen. Tech. Rep. PSW-GTR-149. Albany, CA. **Key Words:** mapping bias; mapping precision; geographic range; incomplete counts

Sauer, J.R., B.G. Peterjohn, and W.A. Link. 1994. Observer differences in the North American Breeding Bird Survey. *The Auk* 111:50-62. **Key Words:** observer bias; counts; between-observer differences; population trends; observer covariables

Sauer, J.R., S. Orsillo, and B.G. Peterjohn. 1995. Geographic patterns in relative abundances and population trends of breeding and wintering Loggerhead Shrikes in North America. Pages 128-141 in R. Yosef and F.E. Lohrer, eds. *Shrikes of the world: biology and conservation.* *Proc. Western Foundation Vertebrate Zoology* 6(1). **Key Words:** geographic range; mapping; relative abundance; *Lanius ludovicianus*; Christmas Bird Counts; Geographic Information System

Sauer, J.R., G.W. Pendleton, and B.G. Peterjohn. 1996. Evaluating causes of population change in North American insectivorous birds. *Conservation Biology* 10:465-478. **Key Words:** population trends; analytical methods; route regression; Neotropical migrants; permanent residents; short-distance migrants; winter weather effects

Schultz, C.W. 1996. Migration trend and morphometric characteristics of Northern Harriers during autumn migration at Cape May Point, New Jersey. M.S. Thesis, Utah State Univ., Logan, UT. 90 p. **Key Words:** migration monitoring; population trends; *Circus cyaneus*; morphometric analysis

Sen, A.R. 1981. Methodological studies of breeding bird surveys in North America. Pages 496-501 in C.J. Ralph and J.M. Scott, eds. Estimating numbers of terrestrial birds. *Studies in Avian Biol.* No. 6. **Key Words:** analytical methods; relative abundance; detecting population changes; density estimates; Maritime Provinces; Canada

Shane, T.G. 1996. The Lark Bunting: in peril or making progress? *C.F.O. Jour.* 30:162-168. **Key Words:** population trends; *Calamospiza melanocorys*

Sharp, B.E. 1990. Population trends of Oregon's Neotropical migrants. *Oregon Birds* 16:27-42. **Key Words:** state summary; guild analysis; Oregon;

Sharp, B.E. 1995. Brown-headed cowbirds and grazing on national forests in the Pacific Northwest. *Northwestern Naturalist* 76:121-126. **Key Words:** population trends; guild analysis; *Molothrus ater*; Oregon; Washington; Neotropical migrants

Sharp, B.E. 1996. Avian population trends in the Pacific Northwest. *Bird Populations* 3:26-45. **Key Words:** population trends; regional analysis; guild analysis; Oregon; Washington; Neotropical migrants; migratory birds; resident birds; habitat associations

Silieff, E., and G.H. Finney. 1981. The co-operative Breeding Bird Survey in Canada 1980. *Can. Wildl. Serv. Prog. Notes.* 122. 18 p. **Key Words:** population trends; Canada; regional analysis

Smith, C.R., D.M. Pence, and R.J. O'Connor. 1993. Status of Neotropical migratory birds in the Northeast: a preliminary assessment. Pages 172-188 in D.M. Finch and P.W. Stangel, eds. Status and management of Neotropical migratory birds. USDA, Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** guild summary; Neotropical migrants; regional summary; population trends; conservation priorities; species ranking criteria

Smith, H.M. 1967. 1967 Breeding Bird Survey in Oklahoma. *Scissortail* 17:56-58. **Key Words:** state summary

Speirs, J.M. 1987. Breeding Bird Survey Ontario Canada summary for 1986. Ontario Birds 5:68-69. **Key Words:** state summary

Sperry, T.M. 1981. Breeding-bird population trends in southeastern Kansas. Kansas Ornithol. Soc. Bull. 32:29-39. **Key Words:** state summary

Stehn, R.A., and S.M.C. De Becker. 1982. Corn damage and breeding Red-winged Blackbird population density in western Ohio. Wildl. Soc. Bull. 10:217-223. **Key Words:** geographic range; relative abundance; bird-habitat relations; crop damage

Taper, M.L., K. Böhning-Gaese, and J.H. Brown. 1995. Individualistic responses of bird species to environmental change. Oecologia 101:478-486. **Key Words:** community ecology; population trends; insectivorous birds

Temple, S.A., and J.R. Cary. 1990. Using checklist records to reveal trends in bird populations. Pages 98-104 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. U.S. Fish Wildl. Serv. Biol. Rep. 90(1). **Key Words:** Wisconsin Checklist Project; comparison of population trends; Christmas Bird Counts;

Thomas, L. 1996. Monitoring long-term population change: why are there so many analysis methods? Ecology 77:49-58. **Key Words:** comparison of analytical methods; annual indices of abundance; Monte Carlo simulation; population trend estimates

Thomas, L., and K. Martin. 1996. The importance of analysis method for Breeding Bird Survey population trend estimates. Conserv. Biol. 10:479-490. **Key Words:** comparison of analytical methods; route regression; nonparametric rank trends; population trends

Thompson, F.R., S.J. Lewis, J. Green, and D. Ewert. 1993. Status of Neotropical migrant landbirds in the Midwest: identifying species of management concern. Pages 145-158 in D.M. Finch and P.W. Stangel, eds. Status and management of Neotropical migratory birds. USDA, Forest Service Gen. Tech. Rep. RM-229. Fort Collins, CO. **Key Words:** population trends; guild summary; Neotropical migrants; regional summary; conservation priorities; species ranking criteria

Titus, K. 1990. Trends in counts of scissor-tailed flycatchers based on a nonparametric rank-trend analysis. Pages 164-166 in J.R. Sauer and S. Droege, eds. Survey designs and statistical methods for the estimation of avian population trends. USDI, Fish and Wildlife Service, Biological Report 90(1). **Key Words:** analytical methods; nonparametric rank trend estimates; route regression; population trends; *Tyrannus forficatus*

Trapp, J.L. 1970. Ingham County breeding bird survey. Jack-Pine Warbler 48:104-

107. **Key Words:** relative abundance; Michigan; frequency distributions

Vandershaegen, P.V. 1981. The birds of Forest, Oneida, and Vilas counties, Wisconsin. *The Passenger Pigeon* 43:69-85. **Key Words:** geographic range; status; relative abundance

Van Velzen, W.T. 1966. Maryland's part in the 1966 Breeding Bird Survey. *Maryland Birdlife* 22:88-93. **Key Words:** state summary

Van Velzen, W.T. 1967. The 1966 Breeding Bird Survey in New York. *Kingbird* 17:74. **Key Words:** state summary

Van Velzen, W.T. 1967. The 1966 Breeding Bird Survey in Georgia. *Oriole* 32:4-5. **Key Words:** state summary

Van Velzen, W.T. 1969. The Breeding Bird Survey in Georgia, 1967-1969. *Oriole* 34:71-76. **Key Words:** state summary

Van Velzen, W.T. 1969. The Breeding Bird Survey in Virginia, 1966-1968. *Raven* 40:3-9. **Key Words:** state summary

Viet, R.R., and M.A. Lewis. 1996. Dispersal, population growth, and the allee effect: dynamics of the House Finch invasion of eastern North America. *American Naturalist* 148: 255-274. **Key Words:** population dynamics; dispersal distances; geographic range; Allee effect; *Carpodacus mexicanus*; range expansion; demographic parameters

Viet, R.R. 1997. Long-distance dispersal and population growth of the Yellow-headed Blackbird *Xanthocephalus xanthocephalus*. *Ardea* 85: 135-143. **Key Words:** population trends; vagrancy

Villard, M., and B.A. Maurer. 1996. Geostatistics as a tool for examining hypothesized declines in migratory songbirds. *Ecology* 77:59-68. **Key Words:** population trends; habitat fragmentation; dispersal; Neotropical migrants; Cerulean Warbler; *Dendroica cerulea*; Prairie Warbler; *Dendroica discolor*

Waldron, M. 1979. An analysis of bird population densities for a ten year period in West Tennessee. *Migrant* 50:49-52. **Key Words:** analytical methods; non-linear analysis; population trends; relative abundance

Wallace, G.O. 1970. An evaluation of the roadside count technique utilized in the Breeding Bird Survey. Ph. D. thesis, Univ. of Tennessee, Knoxville. **Key Words:** survey methods; observer bias; roadside bias; counts

Weber, W.C., and J.B. Theberge. 1977. Breeding bird survey counts as related to habitat and date. *Wilson Bull.* 89:543-561. **Key Words:** survey method; counts; relative abundance; seasonal variation; weather conditions; habitat composition; bird-habitat relations; Ontario

Wells, J.V., and K.V. Rosenberg. 1999. Grassland bird conservation in northeastern North America. Pages 72-80 in P.D. Vickery and J.R. Herkert, eds. *Ecology and conservation of grassland birds of the western hemisphere. Studies in Avian Biology* 19. **Key Words:** grassland birds; bird conservation; conservation priorities; Henslow's Sparrow; northeastern United States

Wells, J.V., K.V. Rosenberg, D.L. Tessaglia, and A.A. Dhondt. 1996. Population cycles in the Varied Thrush (*Ixoreus naevius*). *Can. Jour. Zool.* 74:2062-2069. **Key Words:** winter abundances; winter dispersal; vagrancy; population trends; Project Feeder Watch; Christmas Bird Counts

Whitney, N.R. 1967. 1967 Breeding Bird Survey. *South Dakota Bird Notes* 19:81-83. **Key Words:** state summary; South Dakota

Whitney, N.R. 1969. Highlights of the Breeding Bird Survey 1968 in South Dakota. *South Dakota Bird Notes* 21:7-8. **Key Words:** state summary

Wilkinson, J. 1982. Relation of breeding bird species richness to habitat as shown by the Silver Spring breeding bird survey. *Maryland Birdlife* 38:104-108. **Key Words:** landscape ecology; species richness; habitat analysis; species-habitat relations

Winfree, R. 1999. A BBS run. *Bird Watcher's Digest* 21:47-55. **Key Words:** survey overview; survey methods; New Jersey

Witham, J.W., and M.L. Hunter, Jr. 1992. Population trends of Neotropical migrant landbirds in northern coastal New England. Pages 85-95 in J.M. Hagan, III, and D.W. Johnston, eds. *Ecology and conservation of Neotropical migrant landbirds.* Smithsonian Institution Press, Washington, D.C. **Key Words:** population trends; Neotropical migrants; short-distance migrants; New Hampshire; Maine; bird-habitat relations; regional habitat changes

Wootton, J.T. 1987. Interspecific competition between introduced House Finch populations and two associated passerine species. *Oecologia* 71:325-331. **Key Words:** population ecology; competitive interactions; range expansion; population trends; *Carpodacus mexicanus*; Purple Finch; *Carpodacus purpureus*; House Sparrow; *Passer domesticus*; Christmas Bird Counts

Yong, W., and D.M. Finch. 1997. Population trends of migratory landbirds along the

middle Rio Grande. *Southwestern Naturalist* 42: 137-147. **Key Words:** population trends; guild summary; Neotropical migrants; temperate migrants; New Mexico; riparian habitats

Yunick, R.P. 1968. Summary of the 1967 F. & W. S. Breeding Bird Survey. *Kingbird* 18:75-80. **Key Words:** state summary; New York

Zaletel, L.R.F., and J.J. Dinsmore. 1985. Breeding bird populations in Iowa, 1968-1980. *Proc. Iowa Acad. Sci.* 92:85-94. **Key Words:** state summary

Zimmerman, J.L. 1968. Kansas Breeding Bird Survey for 1967. *Kansas Ornith. Soc. Bull.* 19:9-13. **Key Words:** state summary

Zimmerman, J.L. 1969. Kansas Breeding Bird Survey for 1968. *Kansas Ornith. Soc. Bull.* 20:13-16. **Key Words:** state summary

Zimmerman, J.L. 1978. Ten year summary of the Kansas Breeding Bird Survey: an overview. *Kansas Ornithol. Soc. Bull.* 29:26-31. **Key Words:** state summary

Zimmerman, J.L. 1979. Ten year summary of the Kansas Breeding Bird Survey: trends. *Kansas Ornithol. Soc. Bull.* 30:17-19. **Key Words:** state summary